

Amendments to the Specification

On page 41, please replace the Abstract with the following replacement Abstract:

ABSTRACT OF THE INVENTION

~~The present invention relates to a novel tissue culture system that provides A~~
~~method is provided for the long term culture of proliferating hepatocytes that retain hepatic~~
~~function to produce a hepatic cell culture. Disclosed are methods and compositions for ex vivo~~
~~culturing of Hepatocytes and nonparenchymal cells are co-cultured ex vivo on a matrix coated~~
with a molecule that promotes cell adhesion, proliferation or survival, in the presence of growth
factors, resulting in a long-term culture of proliferating hepatocytes that retain hepatic function.
The co-culturing method results in the formation of matrix/hepatic cell clusters that may be
mixed with a second structured or scaffold matrix that provides a three-dimensional structural
support to form structures analogous to liver tissue counterparts. The ~~hepatic cell culture system~~
~~method~~ can be used to form bio-artificial livers through which a subjects blood is perfused. ~~In an~~
~~embodiment, the hepatocytes and nonparenchymal cells are derived from disaggregated liver~~
~~tissue and are co-cultured in the presence of epidermal growth factor or hepatocyte growth factor~~
~~and beads coated with extracellular matrix protein.~~ Alternatively, ~~the novel~~ hepatic cell culture
~~system~~ may be implanted into the body of a recipient host having a hepatic disorder. Such
hepatic disorders, include, for example, cirrhosis of the liver, induced hepatitis, chronic hepatitis,
primary sclerosing cholangitis and alpha₁ antitrypsin deficiency.